Division of Healthcare Quality Promotion (DHQP) Updates

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Presentation to Healthcare Infection Control Practices Advisory Committee
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DHQP: Protect Patients and Improve Healthcare

- **Data**
  - Outcomes
  - Practices
  - Risk factors
  - Pathogens

- **Implementation**
  - Practices
    - Evidence-based recommendations
    - Tools, technical expertise, and support
  - Programs
  - Policies and communications

- **Innovation**
  - Additional data sources and ways to analyze information
  - New practices and strategies to implement
  - Learning about the unknown
Partners are Critical

Federal Partners
(CMS, FDA, AHRQ, OASH)
Incentives for action, reporting, and guidance

State Health Depts.
Surveillance, prevention and response

Industry
New vaccines, therapeutics, diagnostics, infection control (environmental cleaning)

Academic and Innovation Partners
Modeling, laboratory testing, diagnostics, microbiome

Healthcare Systems
Surveillance and prevention

Healthcare Providers/Professional Orgs.
Prevention and guidance

Public and Patients
Awareness and stewardship

Accreditation organizations, Payors
Prevention Implementation

Healthcare Providers/Professional Orgs.
Prevention and guidance
CDC Seeks to Drive the Field Forward

Keep Questioning:
- How do we add value?
- What can we provide that few can?
- How and where can we help?
- Who can we partner with?
- What does success mean to us?
National Momentum on AR Since First AR Threats Report

CDC’s AR Threats Report

- Executive Order 13676
- National Strategy on CARB
- White House Antibiotic Stewardship Forum
- Presidential Advisory Committee established


HHS HAI Action Plan

- Executive Order 13676
- National Strategy on CARB
- President’s Council of Advisors on Science & Technology Report

ARX established

- Congress appropriates funding to implement CARB activities
- U.S. engagement on UN General Assembly High Level Meeting on AMR

2019 Major Announcements
- AMR Challenge concludes at UN General Assembly 2019
- 2nd AR Threats Report published

Executive Order reestablishes Presidential Advisory Committee

Presidential Message on Antibiotic Awareness Week

AMR Challenge launched at UN General Assembly side event
THE AMR CHALLENGE

CDC led a yearlong initiative to bolster global efforts across sectors and around the world to step up, partner, and play their part in the fight against AMR.

Launched by HHS Sec. Azar at the U.N. General Assembly in Sept. 2018, more than 350 organizations made nearly 350 commitments were made by governments, private industry, and civil society from around the world.

CDC celebrated the AMR Challenge Year in September 2019 at the U.N. General Assembly to show the global progress and commitment to continue the fight against AMR.

Learn more on CDC’s website at CDC.gov/drugresistance.

Challenge Focus Areas

Tracking and Data: Share data and improve data collection

Infection Prevention and Control: Reduce the spread of resistant germs

Antibiotic Use: Improve appropriate antibiotic use, including ensuring access

Environment and Sanitation: Decrease antibiotics and resistance in the environment

Vaccines, Diagnostics, Therapeutics: Invest in development and improved access
ANTIBIOTIC RESISTANCE:
The United States Is Fighting Back

Tracking and Data
- Data to detect and track resistance
- Providing tools for healthcare facilities
- Leveraging new technologies

Infection Prevention and Containment
- Using national alert systems
- Providing resources and expertise in outbreak response
- Advancing research

Improving Antibiotic Use
- Working with partners
- Providing evidence and tools for facilities to implement antibiotic stewardship practices and programs
- Collaborating with food partners

Environment (e.g., water and soil) and Sanitation
- Collaborating to identify gaps in knowledge
- Piloting data-driven solutions
- Promoting better sanitation and access to safe water globally

Vaccines, Diagnostics, and Therapeutics
- Investing millions of dollars in drug, diagnostic, and vaccine development
- Supporting basic research
- Identifying innovative ways to prevent infections using novel therapeutics
BY THE NUMBERS

- Commitments from all 50 U.S. states and Washington, D.C., including all state health departments
- 75+ commitments from 33 countries and across six continents, reaching nearly 3 billion people around the world
- 26 organizations representing 10,000+ healthcare facilities globally pledged to improve infection control or antibiotic use
- 41 major food and agriculture corporations are using their purchasing power to improve antibiotic use in animals
- 47 organizations made commitments related to improving safe drinking water, sanitation, and hygiene (WASH)
- 60+ pharmaceutical and biotech groups committed to develop or provide access to products that will prevent and treat resistant infections
CDC Actions to Combat Antibiotic Resistance (AR)*

Every 4 hours, CDC’s AR Lab Network detected a resistant germ that required a public health investigation (as of 2018)

106,000+ bacteria tested and 2,238 alerts about unusual resistance

NEARLY 13,000 swabs tested to detect resistant germs in healthcare—many launched a containment response

101,511 foodborne germ samples since 2016 (e.g., Salmonella via Pulsnet)

15,300 tuberculosis, C. difficile, and gonorrhea germ samples

CDC invested $300M+ in 59 state & local health departments

500+ local AR experts

8 SURRG sites to enhance response to drug-resistant gonorrhea outbreaks

CDC Supports Innovations

158 public health research projects

NEARLY $110M to 96 institutions for innovations, therapeutics, and diagnostics

125,000+ GERM SAMPLES sent by CDC & FDA AR Isolate Bank

*As of Fiscal Years 2016-2019
The Containment Strategy

- Systematic approach to slow spread of novel or rare multidrug-resistant organisms or mechanisms through aggressive response to ≥1 case of targeted organisms
  - Carbapenemase-producing organisms, *mcr-1*
  - Pan-resistant organisms
  - *Candida auris*
- Assessment of infection control practices
Healthcare Amplification: the Role of Post-acute Care

- Admits colonized/highest risk patients
- Long length of stay
- High-acuity patients
- Less resources dedicated to infection control
- Staffing challenges
New and Emerging Challenges

- Non-tuberculous mycobacteria (NTMs)
  - Leading cause of mortality due to water-related infections

- Healthcare environment
  - Increasing contributor to HAIs and AR infections, resulting in exposure of large number of fragile patients
  - Water increasingly understood as reservoir for HAI/AR pathogens

- Natural environment
  - Growing concern about healthcare amplifying resistance into the community
  - Opportunities for collaboration for One Health Approach
Antibiotic Resistance & Patient Safety Portal

- Publicly-available on November 1, 2019
- Data on healthcare-associated infections
  - 2018 HAI Progress Report
  - National and state profiles
- Additional data available
  - Antibiotic resistance
  - Outpatient antibiotic use
  - Antibiotic stewardship
Guiding Principles of the AR & Patient Safety Portal

**Mission**
PSP will create an experience that is informative, intuitive, and exciting to keep users coming back for more to ultimately support DHQP’s mission.

**Users**
PSP data and content will be accessed by a diverse set of end-users to interact with the information in a variety of ways.

**Data**
PSP will serve as the external facing site and one stop shop for all DHQP data to allow for external use and build awareness among general public.
Cultural Change in Expectations

Beyond Prevention → Elimination
Beyond Acute Care → All Healthcare and Community Settings
Beyond Response → Containment

Infections and complications
Impact in each and every live
Antibiotic Resistance Threats in the United States, 2019

- Better data
- Latest ranking
- Trend estimates
- New information

*Does not include resistant viruses or parasites

All information embargoed until November 13, 2019 at 1 pm ET
CDC’s 2019 AR Threats Report: PREVENTION WORKS.

- **18%** fewer deaths from antibiotic resistance overall since 2013 report
- **28%** fewer deaths from antibiotic resistance in hospitals since 2013 report

**DECREASES IN INFECTIONS CAUSED BY:**

- **41%** Vancomycin-resistant *Enterococcus*
- **33%** Carbapenem-resistant *Acinetobacter*
- **29%** Multidrug-resistant *Pseudomonas aeruginosa*
- **25%** Drug-resistant *Candida*
- **21%** Methicillin-resistant *Staphylococcus aureus* (MRSA)
- **STABLE** Carbapenem-resistant Enterobacteriaceae (CRE) & drug-resistant tuberculosis (TB disease cases)
Despite these gains, CDC’s 2019 AR Threats Report shows additional actions are needed to protect people.

- **2.8M+** antibiotic-resistant infections each year
- **35k+** deaths from antibiotic resistance each year

Plus: 223,900 cases and 12,800 deaths from *Clostridioides difficile*

**Increases in infections caused by:**
- **↑315%** Erythromycin-resistant invasive group A strep
- **↑124%** Drug-resistant *Neisseria gonorrhoeae*
- **↑50%** ESBL-producing Enterobacteriaceae